DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-015766
Date Inspected: 22-Jul-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 1000
OSM Departure Time: 1830
Location: Job Site

CWI Name: See Below

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Orthotropic Box Girders

Summary of Items Observed:

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the following work performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below:

A). Field Splice W4/W5
B). Field Splice W5/W6

A). Field Splice W4/W5

The QAI observed the Flux Cored Arc Welding (FCAW-G) of the side plate field splice identified as Weld Number (WN): 4W-5W-C1. The Complete Joint Penetration (CJP) groove welding was performed by welding personnel Jin Quan Huang ID-9340 utilizing the Welding Procedure Specification (WPS) ABF-WPS-D15-1040A, Rev. 1. The WPS was also used by the AB/F Quality Control (QC) Inspector Tom Pasqualone as a reference during the performance of in process weld inspection and QC verification of the Direct Current Electrode Positive (DCEP) welding parameters during the CJP welding. The groove joint appeared to comply with the AWS joint designation identified as B-U2a and the QC inspector verified the welding parameters and were observed and noted by the QAI as 135 amps. The minimum preheat temperature of 60 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius was also verified by the QAI at random intervals. The welding length was approximately700mm located at plate "B" to plate "C" connection.

The QAI also observed the Flux Cored Arc Welding (FCAW-G) of the side plate field splice identified as Weld Number (WN): 4W-5W-C2. The Complete Joint Penetration (CJP) groove welding was performed by welding

personnel Song Tao Huang ID-3794 utilizing the Welding Procedure Specification (WPS) ABF-WPS-D15-1040A, Rev. 1. The WPS was also used by the AB/F Quality Control (QC) Inspector Tom Pasqualone as a reference during the performance of in process weld inspection and QC verification of the Direct Current Electrode Positive (DCEP) welding parameters during the CJP welding. The groove joint appeared to comply with the AWS joint designation identified as B-U2a and the QC inspector verified the welding parameters and were observed and noted by the QAI as 132 amps. The minimum preheat temperature of 60 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius was also verified by the QAI at random intervals. The welding length was approximately700mm located at plate "C" to plate "D" connection.

The Shielded Metal Arc Welding (SMAW) process was utilized by the welding personnel as per the WPS ABF-WPS-D15-1040A, Rev. 1.

B). Field Splice W5/W6

The QAI also performed a random ultrasonic verification test of the Complete Joint Penetration (CJP) groove weld identified as WN: 5W-6W-A2, A3 and A4. A total area of approximately 10% was ultrasonically tested to verify the weld and testing by QC meet the requirements of the contract documents. The examination was performed in the first and second leg and a ultrasonic test report, TL6027, was generated on this date.

The QAI also randomly verified 10% of the areas that were rejected by the QC technicians Steve McConnell and Tom Pasqualone. At the conclusion of the verifications the QAI concurs with QC assessment.

QA Observation and Verification Summary

The QA inspector observed the QC activities and the welding of the field splices utilizing the WPS as noted above, which appeared to be posted at the weld station. The welding parameters and surface temperatures were verified by the QC inspector and utilizing a Fluke 337 clamp meter for the electrical welding parameters and a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. The ESAB consumables utilized for the SMAW and the SAW processes appeared to comply with the AWS Specification and AWS Classification. The QC inspection, testing and welding performed on this shift appeared to be in general compliance with the contract documents. At random intervals, the QAI verified the QC inspection, testing, welding parameters and the surface temperatures utilizing various inspection equipment and gages which included a Fluke 337 Clamp Meter and Tempilstik Temperature indicators.

The digital photographs on page 3 of this report illustrate the work observed during this scheduled shift.

WELDING INSPECTION REPORT

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Summary of Conversations:

There were general conversations with Quality Control Inspector's Mike Johnson, Bonifacio Daquinag, Jr.and Tom Pasqualone at the start of the shift regarding the location of American Bridge/Flour welding personnel and inspection/ N.D.E. testing scheduled for this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer